

From: Jon Capacasa/R3/USEPA/US
Sent: 11/30/2011 11:33:14 AM

To: Angela McFadden/R3/USEPA/US@EPA; Stephen Field/R3/USEPA/US@EPA
CC:
Subject: Fw: Drinking Water in Dimock, PA

FYI

----- Forwarded by Jon Capacasa/R3/USEPA/US on 11/30/2011 11:32 AM -----

From: Jon Capacasa/R3/USEPA/US
To: "Perry, Scott (DEP)" <scperry@pa.gov>
Cc: Kheffner@state.pa.us, daunkst@state.pa.us, Victoria Binetti/R3/USEPA/US@EPA, KarenD Johnson/R3/USEPA/US@EPA
Date: 11/30/2011 11:32 AM
Subject: Drinking Water in Dimock, PA

Scott - this is a follow-up to recent contacts from Karen Johnson of my staff and my call with you earlier this morning on the Dimock matter. We agreed that a meeting of our agencies would be good to do as soon as possible and I provide below some of the open questions for that discussion.

We have been reviewing the data from citizens, PADEP and Cabot on drinking water wells in Dimock, both on Carter Road and in the near vicinity. It appears that Cabot's drilling program in 2008 and beyond likely caused or contributed to methane migration and other impacts on the shallow aquifers used by private wells. It is also evident, from the extraordinary volumes of data collected by PADEP and the multiple Orders issued to Cabot, that this has been a difficult issue to resolve, with multiple drinking water wells being impacted from drilling activities. The planned meeting of our agencies would focus on working down the list of remaining questions and technical issues involved here.

We want to thank you for sharing the data you've collected, and data from Cabot and other parties, so we could attempt to address the citizens' concerns raised in recent weeks about the November 30 termination of provided water to the residents that have not signed on to the provision of treatment systems. We ask that you consider whatever mechanisms you might have to continue or extend the supply of alternate water to these and other residents in the vicinity for the following reasons:

- We have not finished reviewing the data and we realize that technically the provisions of the Cabot Order have been satisfied since the residents have been offered access to treatment. But after talking to the residents and performing a preliminary review of the data, concerns continue about the reliability of the systems provided by Cabot, if they were intended to have returned the drinking water to pre-drilling quality (background levels). In a number of the six homes that have accepted treatment there are still periodic levels of metals (aluminum, iron, manganese, etc.) well above pre-drilling levels; there are also periodic high levels of methane, ethane and ethene post -treatment. Some samples also show the presence of organic chemicals (like toluene, ethylene glycol) and radionuclides that the treatment systems were not designed to remove. These are common constituents of hydrofracking fluids, flowback and produced waters.
- The citizens are concerned that the long-term effectiveness of the treatment systems and O&M are not sufficient and should be further evaluated (by the state or a third party). Have you have considered requiring NSF-certified treatment systems be used and that maintenance be done by a third-party certified operator?
- The remediation of the natural gas wells by Cabot is apparently still underway to address methane migration pathways. While the remediation of many of the gas production wells required squeezing cement to attempt to stop the flow of methane into the shallow aquifers, it is difficult after the remediation to verify success, except when the methane levels drop. In some wells they have not, and there may need to be further testing/logging or other remediation performed, like placing shallow gas production wells to draw off the pressure in the Upper Devonian formations.
- At the request of the citizens, ATSDR continues to review the volumes of data provided to determine if there are cumulative health risks beyond those addressed by individual Safe Drinking Water Act standards. We have also asked about data from four remaining homes in the vicinity that may not have been sampled (in addition to one which you've indicated was sampled and for which results showed no impact).

EPA has heard additional allegations that Cabot used diesel fuel to hydrofrack at least two and maybe more of the early vertical wells. This could make them subject to the Safe Drinking Water Act's Underground Injection Control Program, for

which EPA Region 3 is the permitting authority. We continue to evaluate this and may pursue an information request or other course of action for proper follow-up.

We ask that you consider whatever mechanisms you have to continue to have Cabot provide alternate water to the residents until these issues can be addressed. We look forward to meeting to discuss this further at your earliest convenience - Karen Johnson and Linda Boornazian are our contacts here to help arrange logistics. Feel free to call me at 215-814-5422 in the interim. Thanks.

Jon M. Capacasa, Director

Water Protection Division, EPA Region III